SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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INSTITUTION OF MECHANICAL ENGINEERS.

The tenth annual general meeting of members was held at the house of the Institution, Newhall-street, Birmingham, on Jan. 28, Joseph Whitworth, Esq., President, in the chair.

The Secretary (Mr. W. P. Marshall) having read the minutes of the previous meeting, the annual report of the council was then read, which showed the satisfactory position and progress of the institution, referring especially to the large increase in the number of members, and also to the important and successful meeting that had been held at Glasgow in the last year. After the adoption of the report, the officers for the present year were elected; also a number of new members.

A paper was read, "On the Theory of Pile-driving; with Description of an Improved Pile-driving Machine," by Mr. Michael Scott, of London, and Mr. Andrew John Robertson, of Blyth.

The first part of the paper considered theoretically the relative advantage of a great number of comparatively light blows, or of a few severe blows, for driving piles; and it was found to be desirable to have as heavy a ram as possible, with the greatest available height of fall that was compatible with the strength of the piles. The pile-driving machine described in the paper is constructed on this principle, the weight of the ram being 1¼ ton, with a fall increasing as the pile is driven, the fall being a small amount at the commencement, whilst at the later blows it amounts to 13 or 14 feet. Two rams are raised by a portable engine between guides, which are readily adjusted to any required inclination; the engine, together with the guides, is carried on a platform high enough to be always above high water; the platform rests on a lower framework, running on a temporary railway laid on the ground, for changing the position of the machine. The winding apparatus for raising the rams is so arranged that the engine raises them alternately, the working being changed by a self-acting apparatus, without either stopping or reversing the engine. The engine can, accordingly, be worked continuously, and an important saving of time is thereby effected in driving the piles. In consequence of the diminished number of blows required for driving each pile, on account of the greater force of each blow, the heads of the piles are not found to be at all injured in driving. The machine is being employed at the present time to drive the piles for the construction of a wharf or quay on the River Blyth, in Northumberland, above the entrance to the proposed new docks at the mouth of that river. The ground is principally sand, and the main piles are driven to a depth of 14½ feet into the ground; the same engine also drives an inner row of stay piles without change of position, and the machine has been found to perform the work with rapidity and precision.

The next paper was "On the Manufacture of Coke and Charcoal," by Mr. Ebenezer Rogers, of Abercarn.

A review was given of the early history and development of the manufacture of charcoal, with the subsequent extension of the process to the coking of coal, and the principal improvements introduced in the latter process were described, from coking by open heaps to the adoption of ovens, by which the small coal that had previously been greatly wasted was converted into coke, and a superior result obtained in yield and quality. Since the introduction of coke ovens, many improvements have been made in their construction; but the expense attending their erection and maintenance, and a consideration of the theory of the process of coking, have led the author to the invention of a plan, by which, instead of the small closed ovens, a long kiln of large dimensions, and open at the top, is employed. The kiln consists of two long side walls, containing a number of horizontal and vertical flues, the latter acting as chimneys. The ends of the kiln are left open while it is being filled, and are built up as soon as it is ready for firing. In filling in the coal, passages are left through the mass from one side to the other, connecting the opposite flues in the side walls of the kiln. The fire is lighted at the bottom of the kiln, through the holes in the side walls, and is spread uniformly through the coal by opening the flues in one side, and chimneys in the other, which causes a draught through from one side to the other; the draught is reversed alternately, until the whole mass is fired at the bottom. All the flues are then closed, and all the chimneys opened, and a current of air is drawn down from the open surface, through the whole mass of coal, to the burning portion below. The coking process commences at the bottom, gradually ascending till it reaches the surface, when the operation is completed. The coke is then drawn, and the kiln charged again with fresh coal; the wagons for carrying away the coke are run into the kiln on a temporary railway laid through it, and the coal for the next charge is then tipped in from the top. These kilns contain as much as 150 tons each, and cost less than the ordinary coke ovens containing only six tons each, the result being a very great saving in original outlay, and in the space required for producing a large supply of coke; whilst, from the great simplicity of their construction, the cost of repairs is very small. Several of these kilns are already in use at some of the largest iron-works, and an increased yield and superior quality of coke are obtained from them. A model of the kiln was exhibited, and a fine specimen of the coke produced by it.

The last paper was, "On the Application of Steam-Power to Agricultural Purposes" (third paper), by Mr. Wm. Waller, of Lincoln.

In two previous papers on this subject, the writer had described the portable agricultural steam-engine and the barn implements worked by steam, and the present paper reviewed the various field implements employed on a farm, giving a historical notice of the early forms and successive improvements, with an account of the introduction and progressive application of steam-power, in place of horses or human labour, for the cultivation of the ground. The principal field implements now worked by steam were noticed, with a description of a steam-plough, and also of the endless railway lately introduced, and applied to the wheels of carts and portable engines; and the question of the principle of cultivation best suited to the application of steam-power was considered. After the paper was read, a small apparatus for determining the evaporating power of different sorts of coal was exhibited in action, and the results were given of several kinds of fuel that had been experimented upon.

The meeting then terminated, and in the evening a number of the members and their friends dined together at Dee's Hotel, in celebration of the tenth anniversary of the institution.

GOVERNMENT SCHOOL OF MINES.

Dr. Percy delivered a lecture on arsenic, tungsten, and wolfram. With regard to arsenic, this metal was found very often in combination with iron and sulphur; its specific gravity was 5·7, and was brittle. It passes directly from the solid to the gaseous state, and gives, when strongly heated, the odour of garlic. In moist air, at an ordinary temperature, it becomes black or brownish, but in dry air it undergoes no change. He would next allude to the composition of arsenious acid. When arsenic is treated with an access of air, it burns with a pale blue flame, and the composition thus formed is arsenious acid. The latter has no smell of garlic, this merely being the case when the metal is in a heated state. Amorphous arsenious acid is a perfect glass compound; its specific gravity has been stated to be respectively 3·698, and 3·798; on keeping this it becomes opaque, owing to the crystallisation which takes place. The vitreous arsenic acid may be easily melted. A combination of arsenic and iron was one of the most deadly poisons which there were in existence. A great difference of opinion had existed between observers as to the solubility of arsenious acid. Arseniate of lead stands a great deal of heat: arsenic acid is produced when arsenious acid is boiled with nitric acid or nitro-muriatic acid, it is sometimes evolved in the roasting of ores of cobalt and nickel. Many arseniates stand great heat without decomposition; arseniuretted hydrogen is a very noxious poison, and this is evolved from several of the South American silver ores, which contain a considerable quantity of arsenic, and he cited the instance of a person in Dublin who, in making some experiments with this, had suffered a most horrible and lingering death. One of the compounds of arsenic and sulphur was realgar; this was a bright red colour when found in a state of nature; it burns in the air, forming sulphureous and arsenious acids, and is readily fusible. The lecturer then drew attention to the mode by which orpiment was prepared. The sulphides of arsenic were easily decomposed by the aid of common black flux. The best ores of arsenic were the native or the scherben cobalt of the Germans, arseniate of cobalt, realgar, orpiment, arsenical iron, and arsenic kies, which last was a compound of arsenic and iron. Some of the South American ores, as he had previously stated, though they contained at least 30 per cent. of silver, abounded with arsenic. He then described the furnaces used for the reduction of arsenic. Arsenic was chiefly obtained in the form of arsenious acid. If smelted in a reverberatory furnace, it was certain to be contaminated with fuel, dust, or smoke; and if in the distillation carbonaceous matter was intermixed, you would get arsenious acid combined with metallic arsenic. It was necessary that the arsenic should be evolved without any products of combustion. A diagram was then shown of the furnaces of Reichenstein. Dr. Percy observed that men could work for a considerable period in arsenical vapour without receiving any material detriment. The method of distillation was then shown; this was performed in cast iron pots about 2 ft. in depth, 1½ ft. in diameter, and capable of holding 4¼ centners. Heat is applied; and the determination of the heat requires to be carefully considered—too much or too little being highly prejudicial—and great practical knowledge in working the furnace is required. The fusion takes place in about twelve hours, and the operation is generally perfect when no condensation takes place. When this occurs, it is ascertained by the insertion of a cold iron rod, which is plunged to the foot of the pot. An account of red arsenical glass was then given, and Plattner's process for obtaining gold from arsenic was described; prior to his discovery it was thrown away. Previous to commencing with iron, he would draw their attention to tungsten. This was a most important mineral, and generally occurred in the form of an acid. This was first discovered in 1782 by Scheele; it is of a dull grey colour, excessively heavy, its specific gravity being 17·4; it is very infusible, and has several compositions—wolfram being one of its compounds. This frequently occurs in tin ores, and from its specific gravity has been found very difficult to be separated. The process patented by Mr. Oxland, of Plymouth, was then alluded to, for separating the wolfram from the tin in dressing. He understood that it was intended to use it as a mordant for dyeing purposes. Whether they imagined it would supersede stannate of soda he was not aware, nor had he heard with what results. Although the process was supposed to be a new one, they would find it described in a work which was now but little read, and which had been written about thirty years since—he alluded to *Aikin's Dictionary of Chemistry*. In order to obtain valuable applications of this mineral he had tried it in alloys with nickel, gold, silver and copper, but had made no observations worthy of consideration. The next subject of which he had to treat was iron, and this was a most important metal: in fact, it is one of the most useful. Pure iron was never produced for a metallic purpose, and if iron had not in it the so-called impurities it would not be of any value, as, chemically speaking, pure iron would be worthless. There were three kinds of iron—wrought iron, steel, and pig or cast iron. Malleable iron is erroneously called by some wrought iron, but this is cast iron, as this can be obtained in its purity in a compact form. Although this was the most prominent metal in the world, there still remained a great deal to be done with regard to its chemistry. Its specific gravity was 8·7807. The different ores of iron were then alluded to, as well as the acids which affected them. The theory and practice of welding iron was fully gone into; the compounds of iron and sulphur, as well as of nitrogen and iron, and likewise the particular gases which rendered the metal more or less brittle or friable. The experiments of Shafthaul and Marchand were drawn attention to, the great discrepancy which existed between them being shown. The lecturer concluded with calling their attention to the chemistry of iron, and hinted that probably some of the gentlemen who were amongst his auditory would feel a spirit of emulation and direct their attention to this subject, as any new facts that could be shown bearing on the manufacture of this important article would not only be remunerative to the discoverer, but of great value to all interested in the trade.

On Monday, the lecture delivered by Mr. Warington Smyth was on the Mode of carrying Minerals in Mines. He had previously adverted to the various methods which were pursued in boring; several things he had omitted to mention, because as at present, though under trial, they had not been practically proved. Sinking of shafts by boring, with the use of an instrument from 12½ to 18 inches in diameter, had been successfully practised in the Ruhr district, in Westphalia, and at Saarbruck, in Prussia; they had been mentioned by Kind and Degoussée. This instrument required to be supplied with cutters, some of which were in the form of radii, and could be removed at pleasure; but this system had not been found so efficacious as the ordinary system of sinking shafts. The method of carrying minerals was one which required great care, where the ores when broken are wheeled from the levels to the shaft, and thence hauled to the surface, though apparently little or no attention is given to this important point. Economy was not considered in rich districts, where the minerals, such as tin and silver, were of such intrinsic value; but there was great difference in the worth of stone and coal, and these were generally transported on more scientific principles, as the expense of carriage formed a considerable item in their expenditure, and materially enhanced their cost. There was a material variation between the charge for transport in the mine and at surface; underground it would be in many cases 1s. per ton, while at daylight, by rail, it would not exceed 1d. for the same weight. Pliny had written of the conveyance of ores from the lead mines in Spain in the time of the Romans; he had stated that the men there were accustomed to carry out the minerals in sacks upon their backs, and the same practice was now commonly employed in India and Turkey. They would no doubt be surprised to hear that this was still in use in some districts in England and Scotland, and in the latter country the case was quite common with girls, until stopped by the Act. In the Forest of Dean it was carried out by lads; this was a very expensive plan: a lad would not be able to carry out more than from 60 to 80 lbs. weight, while for a full grown man 100 lbs. would be a very considerable load. In many cases, sledges were used—skips or sleds, as they were more generally denominated—but these could not be usefully employed where wheeled carriages were used. In metallic mines, these sleds were almost unknown; they were particularly applicable to inclined planes, and having a ring at the extremity, they could be drawn or propelled, containing a considerable load, with comparatively little force. These were much used in several small workings in Lancashire; when once a load of coal was heaped on this, a movable frame might be placed round, this to be followed by others in succession, so that as much as from 4 to 5 feet of coal could be piled up in it. This plan answered very well, and they had a system of despatching them to the shaft, so as to obviate the expense of loading and reloading. In metallic mines, wheelbarrows were more commonly used, and as a considerable number of these was consumed, great attention should be paid to their durability and cost. It was advisable, if you could, in metallic mines to employ four-wheeled vehicles. [A model of a sled was then shown.] In some cases, pieces of plank were laid down through the level, and over this the men were able to wheel with greater facility than if they followed the rough flooring of the mine. A curious four-wheeled vehicle was employed in Germany and Hungary, this was called a "dog;" he could assign no reason for this, except that the miners stated that, when in motion, the noise it made was like the barking of that useful animal. This consisted of a rectangular box, resting on four wheels, the front wheels were larger than the two hinder ones; these were on pieces of wood, something similar to a keel, they were about 4 ft. wide and 2 ft. high, and could run with considerable speed, the pressure being regulated by the handle. Many people had seen with surprise the quickness with which these travelled, there being nothing like it unless that performed by railway carriages on trams. It was only in Hungary and Transylvania the people were so skilful, in Germany they were not so well drilled to the rapidity of motion; in Germany, perhaps, they transported more, but speed was sacrificed. Wooden rails in Germany were first mentioned about 320 years ago, Agricola speaking of them in one of his works the close of last century. There was considerable difference of opinion as to whether iron or wood was the better material. Tram-plates were still in great use; they were employed, not because the owners preferred them, but having large stocks on hand, they did not like to lose them. There was immense wear and tear by the cutting of these plates, but they had this great advantage, they could easily be taken up and others laid down in their places; wrought-iron is now used. A description of the various rails used in the North of England in both metalliferous and non-metalliferous mines was then given, as well as the modes of drawing underground by stationary engines, as practised in several of our coal districts, the sections of which were minutely described by the lecturer, who concluded by practically demonstrating the great superiority, both in transport and economy, of steam over horse-power.

Copper Mines of South Africa.—An interesting paper, by Dr. Rubbidge, was read on Wednesday, at the Geological Society (Col. Portlock President, in the chair), "On the Copper Mines of Namaqualand." The examination by Dr. Rubbidge was made in 1854, and in consequence of the subsequent discoveries, the paper is not of such value as if it had come to hand earlier. It stated that the ores were found not in lodes but in runs, sometimes having a northerly, and at others a southerly, dip. Considerable quantities of rose quartz were discovered near Steinkoph, Springbok, and Copperberg; the runs could be traced for about 400 yards, the country being gneiss, with occasionally granite running through it; these metalliferous deposits could be followed at intervals for many miles; in some places the surface rock was gneiss, with mica-schist, with a little granite, intermixed with hornblende, the hornblende schist passing into syenite and greenstone. The ores consisted of silicates and oxides at the surfaces, and the purple sulphurets were generally found below; occasionally sulphate of molybdena, chromate of iron, chrome ores, and magnetic iron were likewise met with. An old copper mine had been worked as far back as 1680, by a Dutch governor, of the name of Vanderstelle, and this had produced silicate of copper. The water in the neighbourhood was brackish, and the felspar was of the description denominated soda felspar The Springbok mine was about 3000 ft. above the level of the sea, and 600 feet over that of the plain. The workings had been sunk about 40 ft., the ground was not favourable, being very hard, and it would be useless to look deeper for rich deposits. The North Field comprised mica-schist, hornblende, and several other rocks. Granite could be met with in masses sometimes the size of a man's hand, at others in bunches of many tons weight. A report, presented to the Colonial Houses of Parliament by their surveyor, Mr. Andrew Wyley, was read, and this, though it agreed in the nature of the ores with that of Dr. Rubbidge, materially differed in many geological points of interest from the views of that gentleman, Mr. Wyley being of opinion that the purple sulphurets would be found at the top, and as they went deeper copper pyrites would be arrived at; it would, however, be a matter of great consideration whether any operations for copper mining would be commercially profitable. The surrounding country was desert, with scarcely a bush, sterile, unfit for all kinds of vegetation, and consequently the explorations for metalliferous deposits would be easily carried out; the rocks, for a great distance, could be seen stained with a deep green tint. Prof. Smyth observed that all those who were acquainted with mining were perfectly aware that a very small percentage of copper would give a rich green colour, and extend over a comparatively large surface, and this, in many instances, was very deceptive. There was a mineral called allophane, which gave out a rich blue and green tint, seldom containing more than 1 to 2 per cent. of copper; large quantities of this substance were to be met with in Hungary and Germany. He believed the copper deposits of the Cape Colony had not yet been thoroughly investigated; they were as yet but imperfectly known, and it would, therefore, be premature to give any hasty opinion as to their capabilities or merits as a commercial undertaking. There were several diagrams of the country exhibited, together with a geological section of the Cape Colony, and a view of the first cutting at Springbok. On the table were a number of mineralogical and geological specimens of the district, some of them of much interest; several of the specimens of copper ore were very rich, but the majority comparatively poor and light. There was a crowded auditory, and but few members took part in the discussion. In the *Mining Journal* of Jan. 31, we gave the account of the sale of 274 tons of this ore, of 23 per cent., which realised the sum of 9362*l.* 6s., or 34*l.* 3s. 5d. per ton. From this it will be seen that great changes have taken place since Dr. Rubbidge compiled his paper; probably had he anticipated half so good results he would have considerably modified his opinions as to the value of the runs after continuous and extended exploration.

Geology.—At the Royal Institution, on Saturday, Prof. Phillips delivered his second lecture on some of the leading points of geology, when he directed attention almost entirely to the action of water in producing geological phenomona, and to the probable causes which have changed the level of the sea at various periods. He observed that the different depositions which have formed the succession of strata constitute as distinct a chronological order in the history of the structure of the globe as that formed by the succession of events in the history of man, though astronomical data are, and must ever remain, wanting to determine the periods of each rock formation, and the time occupied during its deposition. The fact that the strata of the earth were formed by successive depositions was known to the earliest historian, and the account given by Herodotus of the formation of Egypt by the depositions of the Nile is nearly correct, because it was founded on observation, and it contrasts most favourably with the extravagant notions of geologists of the 17th and 18th centuries, who based their theories merely on speculation. Dr. Woodward, for instance, supposed that all the rocks which constitute the crust of the globe were held in solution in a vast mass of water, from which they were deposited in the order of their respective specific gravities, and that after all the strata had been thus formed, the redundant water retired in some incomprehensible way from the surface. It was Dr. Hutton who first announced the opinion that the phenomena observable in the structure of the earth have been produced by the action of existing causes, and that opinion has since been ably supported by Sir Charles Lyell, who has shown that, by a long continuance of the causes now operating on the surface of the globe, effects similar to those observed by geologists might be produced. Prof. Phillips proceeded to explain the chemical composition of sea water, with a view to explain the nature of the rocks that might be formed by its decomposition, and to point out the mechanical action of the fluid to show how substances suspended in it would be deposited during the fall of rivers. The 27 per cent. of salt held in solution in sea water, and the 2½ per cent. of sulphate of magnesia, which are the principal matter it contains, afford no explanation directly of the immense quantities of lime which have been deposited in all parts of the world. Many of these limestones, like the marbles of Derbyshire, are composed of entire masses of shells; and Prof. Phillips stated that he should in a subsequent lecture explain the collection of such masses of carbonate of lime by attributing it to the power possessed by the encrinites, and by the living zoophites, of eliminating it from sea water. The formation of coral reefs in the ocean at the present time, he observed, affords an instance of a similar phenomenon. This process of rock formation by the coral zoophites cannot be carried on at a lower depth below the surface than 300 ft.; and indeed it appears, from the dredgings of the late Prof. Forbes in the Egean Sea, that at a depth of 300 fms. all animal life ceases, for light cannot penetrate to lower depths, and without light the vegetation necessary to the support of animal life cannot be maintained. Prof. Phillips next compared the spaces occupied by land and by water on the earth's surface, and he showed by this comparison that no considerable rise of the level of the sea could be produced by the causes usually assigned for the elevation of the water above the tops of the highest mountains. It has been computed, by various modes of calculation, that the extreme depth of the ocean is about nine miles, and in several parts of the Atlantic soundings have been taken at a depth of three miles. The average depth Prof. Phillips considers about a mile and a half, and the area occupied by water, compared with that of land, is as three to one. From these data he has been calculated that, if there were an elevation of land at the bottom of the sea equal to the space occupied by the land now above the surface, the effect of such an elevation would not raise the sea more than 500 ft. above its present level, which would be altogether incompetent to account for the water having been at different times raised above the surface of all the present land. There can be no doubt, Prof. Phillips said, that all the central parts of America, as well as the eastern portions of the globe, have been under water, and it must be supposed that the changed condition was produced by the combined action of the lowering of one portion of the crust of the earth, and the elevation of another. To this subject, he said, he should more particularly direct attention in the next lecture.

Meetings of Public Companies.

UNITED MEXICAN MINING ASSOCIATION.

The half-yearly general meeting of proprietors was held at the offices of the association, Finsbury-circus, on Jan. 28,—Sir JOHN EASTHOPE, Bart., in the chair.

Mr. WESTMACOTT (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.

The following report was then read:—

JESUS MARIA Y JOSE.—The new shaft in this mine was in August last completed to the requisite depth for effecting the communication between the new shaft of St. Maria and the levels of San Maximo and San Juan, the shaft being carried to a further depth of 10 varas for the purpose of forming a reservoir for water. A considerable accumulation of tepetate, or refuse soil, deposited in the above levels was at once brought to surface, the water which had filled the lower pozos removed, and the extraction of the ore itself commenced on Aug. 27. The anticipations so long formed proved to have been well grounded: the bi-monthly mail of September stated that ore of a richer ley than any previously obtained had been found, and generally both the quality and quantity of it continued to improve, the extraction in the two weeks and three days being 650 cargas. The favourable indications continued, and the extraction for the month was 950 cargas. The ley had improved, the average being 9·40 mks. per monton, while some portion had reached 18 mks., the vein widening out, especially in the pozos of San Maximo and Dolores. The bi-monthly despatch of October 13 reported the yield to have amounted to nearly 300 cargas weekly, and a new and lower level was commenced for the more perfect speculation of the mine. The advices of Oct. 27 announced the extraction of ore from five points, and by the mail of Nov. 19 the board were informed that the mine continued to yield ore of 8 mks. and upwards per monton, the extraction averaging since the last date 275 cargas weekly, which was rather more than the present hacienda power (consisting of 25 arrastres) could beneficiate. It will be observed that in regard to richness the ore had somewhat fallen off from the report of Oct. 2, 1856, received by the bi-monthly mail of November, which represents its value then to be 9·40 per monton. The commissioners further state that four of the five labores in ore were to the north, the discoveries thus extending in the company's own pertinencias, where a considerable portion of unexplored territory existed, the direction being in that of the celebrated La Luz. The mine continued to yield good ore from all the principal labores in the new works, particularly those to the north, the same class of ore being found varying in depth from 2 to 2½ varas. The principal points from which this ore was in course of extraction were—to the north, the frente of San Maximo, the pozo of San Juan, the pozo of San Maximo, and the crucero of San Pantaleon; and, to the south, the pozo of Dolores. It may be remembered that the crucero of San Pantaleon had very recently been driven for the purpose of cutting across the vein at a higher level than the frente of San Maximo, and it appears that on Mr. Fitzherbert going down the mine two days prior to the above statement, he had the satisfaction to find that it had crossed equally good ore, the direction of which was to be followed, and a frente formed. Though the weekly expenses had been considerably decreased, the amount of extraction was about the same as before reported, the vein having fortunately become less hard. The directors deem it desirable, in affording the shareholders the latest intelligence received by them—viz., Nov. 28, to give verbatim the last report upon this undertaking:—"The principal feature to be noted regarding this mine is, that the probability which was referred to some time since of a new vein having been discovered crossing the original vein of Jesus Maria, may now be considered so far proved as to leave very little doubt of the fact, every day the separation becomes clearly defined, forming an angle with the old vein of about 30°, and pointing more directly north and south; it is more constant and unvarying in its yield, and the azoque, or silver ore adapted for amalgamation, is not as was frequently the case in the other vein, interrupted by barren portions. During the last four weeks, operations have been confined to this vein, and the result is, that though the expenses have been reduced one-fourth the average extraction of ore has been fully maintained; in the last fortnight it has amounted to 375 cargas. The ley also has gradually improved, the assays for the last three weeks having given respectively (in marks per monton) 8 mks. 30 c., 8 mks. 50 c., and 8 mks. 90 c. The assays are made of the ores immediately after they have been ground at the hacienda; but, as has been before explained, there is an accumulation of three weeks' produce on hand unground from the want of sufficient animal power, and it follows that these assays refer to ore extracted from the mine more than three weeks previously." The debt due to the company from this mine is $260,319 With respect to the sufficiency of the funds in hand fully to complete the researches of Jesus Maria, it will be observed that the directors have supplied from England the sum of 16,000*l.* within the last twelve months, leaving now an insufficient amount to meet the engagements here. Major Farrell, in his last letter from Mexico, dated Nov. 19, says, "That 5000*l.* more may be found needful to see the result of the mine of Jesus Maria." The directors have called for the last moiety of the 3152*l.* 10s. last subscribed, and when it is received will then have obtained 15,193*l.* 10s. towards the 21,587*l.* voted in January, 1854; the remaining 6393*l.* 10s. it is important should be raised. The expectations of receipts from the Zacatecas indemnity have for some time been disappointed, owing to the distracted state of Mexico; the commissioners represent themselves to be crippled in their exertions to reduce the ore already extracted, and it is said to be highly expedient that the shaft should be further deepened to the extent of from 30 to 40 varas, in order to give full scope to the operations needful to the works of the mine.

LA TRINIDAD.—The directors will but briefly allude to this speculation, which, with their entire approbation, the manager in concert with Mr. Furber ceased working in the early part of September. The last report upon the mine, dated July 28, stated a cross-cut previously mentioned had been driven 3½ varas before reaching the reliz, or outer wall, and the lode then showed a width of 6 varas, the upper wall being so well marked as to preclude the necessity of continuing the cross-cut further to the westward. The frente called Dolores had advanced nearly 16 varas, and the vein proved very formal and broad in it, the pintas, or detached fragments, being favourable, and strips of ore of a low ley appearing. The greatest economy the board were assured was observed in working this mine, consistent with a proper trial and speculation of any favourable appearances that might occur, and Major Farrell wrote that he was not without hope that he might soon have it in his power to communicate a change for the better. Nothing new, however, occurred during the month of August, no improvement being apparent, and in the advices of Sept, 15 he informed the directors that it had been considered advisable to stop the operations with a view to resume them after a few months. The debt due to the company from this mine is $107,515 4.

ALDANA.—The proprietors are aware that this mine, although held in estimation by the board, has for some time past been merely retained possession of, the operations carried on being of little more than a nominal kind. It is the determination of the directors to keep it until circumstances may lead them to develope its resources, or until an offer of a sufficiently satisfactory nature may induce them to part with it. The debt due to the company from this mine is $121,995 3 5.

RAYAS.—The debt due to the company from the owners of this mine is $222,939 0 4. It has manifested for several months a variation of profit and loss.

DOLORES.—This hacienda is engaged in beneficiating the ores from the mine of Jesus Maria alone, previously to the reduction of which the board had discouraged its employment on bought ores, a speculation open to loss. There is an accumulation of three weeks' produce on hand unground, from the want of sufficient animal power, and it follows that these assays refer to ore extracted from the mine more than three weeks previously. Very recently 13 horses have been purchased, which with 10 borrowed from the mine of La Trinidad have enabled us at length to work all the arrastres of the haciendа (they amount to 30) except one, for which four more animals are required, and will be supplied as speedily as they can be procured.

DURAN.—This hacienda remains on lease.

QUICKSILVER.—The price of this article was quoted at $56 per quintal (100 lbs. weight). The stock in use at Dolores was 5938 lbs. 3 ozs.; in store, 3300 lbs.=9238 lbs. 3 ozs.

ZACATECAS INDEMNITY.—The disturbed condition of the country had prevented the conducta with specie from the capital being sent to the coast, but the directors trust that the next mail will apprise them of a part of the company's claim having been paid to their agents. The amount still remaining unliquidated by the Mexican Government is $48,504 0 2.

MANAGEMENT IN MEXICO.—The directors have to intimate the appointment of Mr. Fitzherbert in the room of Mr. Glass.

FINANCES IN LONDON.—The following is the London audited account of receipts and payments from June 30 to Dec. 31, 1856:—

Brought from audited account, to June 30, 1856				£10,721	18 8
RECEIPTS.					
New loan	£1560	15	0		
Transfer fees	40	10	0		
Interest	114	18	11		
Discount on stamps	0	12	0=	1,716	15 11
Total				£12,438	14 7
PAYMENTS.					
Amount charged to the manager in Mexico	£ 4	1	0		
London expenses (two quarters)—viz., directors' fees, salaries and wages, advertisements and newspapers, fire insurance, coals, oil, &c., petty disbursements, rent and taxes, stationery, postage, &c.	541	4	8		
Dividends, bills payable, and interest on new loan, &c..	8303	1	10=	£ 8,848	7 6
ASSETS.					
Exchequer bonds taken at par	£3000	0	0		
Cash at the bankers	429	11	3		
Stamps on hand	150	0	0		
Petty cash on hand	6	16	8		
Interest on new loan on hand	4	17	2=	3,590	7 1
Total				£12,438	14 7
Assets brought forward	£3590	7	1		
Amount received on account of second moiety of the second subscription to the new loan, due Feb. 2 next...	148	5	0=	£ 3,738	12 1
PAYMENTS.					
Dividend account	£ 9	2	6		
Sundry accounts	130	5	0=	139	7 6
Leaving				£ 3,599	4 7
Subject to the unclaimed scrips, dividends, and interest on new loans.				5,158	9 4
Deficit				£ 1,559	4 9
FURTHER LIABILITY—Acceptance for 3000*l.*, due Feb. 7 next				3,000	0 0
Total deficit				£ 4,559	4 9

The CHAIRMAN said the report contained all the information the directors could afford, and the only recommendation he could give was as to the raising a further sum of 6000*l.*, and whether the proprietors would view it in the same light as the directors. They invited the proprietors freely to discuss the matter, so that whether they should be prosperous or not they might continue in the same amicable spirit. It would be, no doubt, difficult for some of them to understand the report, from its being read in the usual way, and he would endeavour to re-state some of the principal points. They had got to the level of the old workings in Jesus Maria, and it was desirable to sink the shaft 30 or 40 yards deeper, because that would be in virgin ground, and until they got there they would not be able to judge the value of the ore, which had considerably improved, both in richness and quantity, in depth. The proprietors might enquire why the mines did not pay their expenses, or something beyond it. He (the Chairman) could only tell them that they scarcely met the expenses up to the present time, and the manager had decreased the expenditure at a time they ought to have increased it. But the board were obliged to send out word that they had no confidence in the working, and must reduce the expenditure that the produce might meet it. In consequence they were going on with their power crippled, both in reducing the ores or sinking the levels. The board entertained no doubt that the best policy would be to give the commissioners further credit for 5000*l.* to buy mules and sink the shaft 30 or 40 yards, although the present state of the money market would render it a difficult task. He had not been much disappointed in spending the funds, as he would remind them when they contemplated sinking the shaft it was agreed that they should raise 21,000*l.*, and out of that sum only 15,000*l.* had been subscribed, and in addition they had been disappointed in the receipts from the Zacatecas spoliation. Hitherto they had merely been able to keep going, but not with that vigour to ensure early success, and it would be for them to determine whether the proprietors would give them power to draw a moderate sum. The directors are willing to share with the other proprietors; but if they cannot raise any more money they cannot send out instructions for the commissioners to draw, as the financial statement showed, at the present time, a deficit of 4559*l.* 4s. 9d. He (the Chairman) would be exceedingly glad to answer any questions, and his colleagues would do the same, and he would, therefore, move that the report be received and adopted. (Cheers.)

Mr. JOHN PHILLIPS said, before the resolution was put, he would make a few observations. As to the state of the concern, he generally coincided with the directors, and that the appearances were quite as favourable as anticipated. They have a good mine, but it might be ruined by a bad way of working, and he must confess the way the mine was being worked, in his opinion, was ruinous. (Hear.) It might be said he was always dreaming of this shaft: three or four years ago he said the shaft must be sunk. They had not sunk to the bottom of the old workings, but to the top, and the expenses were still going on. The question was—What was to be done now? If the 6000*l.* were to be raised, he (Mr. Phillips) would only agree to it upon condition that the shaft should be sunk to a certain depth, say 30 or 40 varas below the old workings. (Hear.) He observed that the weekly wages were $2000, or 400*l.*, and that they proposed to reduce them by stopping the very works upon which the welfare of the concern depended—the sinking of the shaft. By a different system he believed the ore might be raised at one-half or two-thirds the present cost; and, in addition to the $2000 a week, there was the cost of management, which he considered too high for so small a concern—1200*l.* a year for the chief commissioner and 500*l.* for the under commissioner. He would suggest that the directors should put it to Major Farrell whether he would not consent to a reduction until the mines were in a profitable state. He (Mr. Phillips) had nothing to say against Major Farrell, believing him to be a most worthy man. (Hear.) But the concern had arrived at a time when it was either life or death to it, life if worked properly, and destruction if it is worked as at present. If they did not go on with the shaft they might as well stop the mine. He would stongly recommend the directors to sink the shaft 30 or 40 varas, and which he thought might be done for 1000*l.* or 1200*l.* out of the funds to be raised; and if they did not determine to do that he would again repeat that he should advise them not to go on. (Hear, and cheers.)

The CHAIRMAN said the proprietors could not fail to be deeply obliged for the information at every meeting given by Mr. Phillips. That gentleman was practically acquainted with the subject he was talking about, and they could not do better for the interest of the proprietors than invite him to a seat at the board, when they would have his advice, and receive from him explanations upon many subjects with which they were unacquainted. (Hear.)

Mr. BARWELL suggested that the report should be put into English, as many of the proprietors did not understand varas and pozos. He approved of sinking the shaft, by which means they would get into virgin ground. How many English mines, after an enormous expenditure, had been abandoned, and others had come in upon the ashes and made princely fortunes out of them.

Mr. WILLIAMSON contended the root of the evil was the want of an efficient mining engineer out there, to show the men how to work the mines. He had nothing to say against Major Farrell or Mr. Fitzherbert, but they ought to send out an efficient Cornish miner. He approved of sinking the shaft, but considered they ought, as in Cornwall, to drive levels every 10 fms., instead of sinking the whole 30 or 40 fms.

The CHAIRMAN said some of the most enormous losses had been made between here and Mexico by sending out Cornish miners. If any proprietor would go and consult Mr. John Taylor, or had they enquired of his friend, now no more, Mr. Fowell Buxton, and asked if they ought to send out a Cornish miner, they would say no. They had employed a most intelligent miner in Mexico, a gentleman who, the board were told, was not only energetic but scientific, and thoroughly acquainted with Mexican mining. He (the Chairman) should be surprised if Mr. Phillips did not agree with him that they could not improve upon engaging the best native talent. Major Farrell, although not a miner, was a gentleman of highly scientific habits, and well able to judge of the best course to be pursued. They regretted that Major Farrell should have been away in Mexico so long as four months; but they had no doubt he had been detained from day to day, in expectation of getting money on account of the Zacatecas Indemnity, and which they needed so much. They were obviously anxious that Major Farrell should return to the mines, which were about 400 miles from Mexico.

Mr. WELCH considered it very desirable to sink the shaft, but the difficulty was in raising the money. He believed the inducement was not sufficient for parties to come forward and advance the 6000*l.*, more liberal terms ought to be offered. He thought there would be no great difficulty in raising the money, if better terms were offered than 5 per cent., and a bonus of 25 per cent. He suggested some plan similar to that of the red scrip, which had all been paid off.

Mr. BIDDULPH (a director) agreed with the honorable proprietor, that better terms ought to be offered. But they wanted the money immediately, and the forms to go through for making any alteration would occupy nearly six months. He hoped the large subscribers would come forward, as the prospects appeared satisfactory.

The CHAIRMAN said the directors had contributed a larger sum than their proportion; and they would still continue to advance more, and hoped the proprietors would also join them.

Mr. TASKER agreed with Mr. Phillips that the shaft ought to be sunk, and the money raised for that purpose. They had been in difficulties before, and were in debt 150,000*l.* to 200,000*l.*, and by raising 50,000*l.*, they paid the whole off, and something in the shape of dividends. (Hear.) Hitherto there had not been a proprietor that held their position as hopeless or desponding. He (Mr. Tasker) had contributed 2000*l.* out of the small sum raised, and he would still stick to the boat. (Cheers.) If they wished to see it carried out, he should like to see it done next week. He should be glad if they could send out some competent miner, on whose judgment they could rely to report on their mines and works; he would also be glad if Mr. Phillips would join them, and if Mr. Williamson would assist them.

The CHAIRMAN explained the difficulties in the way of sending out any one, and that he had more reliance on those they had there, because they were acquainted with the people and the country, and were much more likely to succeed than strangers.

Mr. PHILLIPS felt highly complimented at the manner in which the Chairman had alluded to him, and he should have been happy to have accepted the invitation of joining the board, but his time was so taken up that he could not attend to the duties; at the same time he should be always happy to give all the information and advice in his power, which would, in his opinion, be quite as useful as attending the board meetings. The working of the mine was very simple, as there was no steam-engine or engineer required, and he could not see that any good would result from sending out a Cornish miner, or any other party to inspect the mine. He did not blame the commissioners, who he believed were aware of the necessity of sinking a shaft, and were quite capable of doing what was right if they were supplied with the funds.

Mr. CLIFFORD believed it would give the greatest satisfaction and confidence in the concern to every shareholder if Mr. Phillips would join the board, and he sincerely hoped he would consent. (Hear.)

The CHAIRMAN said if Mr. Phillips would join them they could economise his time by only calling upon him when anything of importance occurred, and he would be affording good service to an old concern.

Mr. PHILLIPS having promised to consider the matter, the resolution adopting the report and accounts was carried unanimously.

The CHAIRMAN said the next resolution he had to propose was that the directors be requested to use every means in their power to raise the sum of 6393*l.* 10s. to make up the sum of 21,507*l.* authorised in Jan., 1854.

The resolution was seconded and carried unanimously.

A cordial vote of thanks to the Chairman terminated the proceedings.

SOUTH AUSTRALIAN COPPER MINING COMPANY.

A special general meeting of shareholders was held at the offices of the company, No. 11, New Broad-street, on Wednesday, for the purpose of considering a certain conditional contract entered into by the committee of the South Australian Copper Company with a company to be called the Strathalbyn Mining Company (limited).

Mr. THOS. WINKWORTH in the chair.

Mr. W. L. WEBB (the secretary) read the notice convening the meeting.

The CHAIRMAN said that since the last meeting, as they had been informed by circular, the board had been engaged upon the immediate object then delegated to them; and he (the Chairman) flattered himself, and he hoped not without reason, that they were at length sailing in smooth water. The board had received very satisfactory letters from Mr. Squarey as to the prospects of the mine; and the samples which were sent over had been assayed, and produced very flattering results. Messrs. Phillips and Darlington had examined the ore, and were of opinion that if the jack were separated from the lead, which could be easily done, it would be very valuable. Messrs. Walker, who had also examined the various samples, and were of opinion that by picking and dressing, and concentrating it on the mine by roasting, it would arrive here very rich. Notice of a shipment of 324 tons of the ore had been received from Mr. Squarey, and if only sold at the same rate as before, it would yield 8*l.* 10s. per ton. (Cheers.) From the sample in hand a large buyer had offered to purchase the lot at 8*l.* 10s. per ton, but when they saw it in bulk it might alter their opinion, as it would depend on the state of the market, and they hoped to receive a much larger price. However, there was sufficient evidence to prove that they were not working upon a property that was worthless, and he felt satisfied they had a valuable mine with proper management. (Hear.) He was happy to inform the meeting that, acting upon the authority given to the board, they had effected a sale to a new company subject to confirmation at the present time, and it would be more satisfactory for them to know that out of the holders of 55,000 shares, more than 34,000 had sent in their adherence to the new company, and he had reason to believe that the greater portion of those outstanding would join; so that instead of the change being slow it would be very quick, more especially as the new company would be under the Limited Liability Act, and there would be no responsibility above the value of the shares. Under these circumstances, he anticipated that there was scarcely a shareholder that would hesitate joining. The circular stated that about 3s. 6d. would be returned to those who did not take shares, but upon calculation he was afraid it would not exceed 2s. 6d. However, the directors would use their best exertions to return the largest amount, and with the least possible delay. Mr. Vallance (the solicitor) would inform the meeting of the proceedings that had been prepared, and either he (the Chairman), or any member of the board, would be willing to answer any questions that might be put to them.

Mr. VALLANCE then read the abstract of a contract, by which it appeared that the South Australian Copper Company agreed to sell the whole of their property to the Strathalbyn Mining and Smelting Company for the sum of 11,500*l.*, subject to the confirmation of the shareholders at the present meeting—the new company agreeing to pay the whole of the debts and liabilities of the old company. Every shareholder in the South Australian Copper Company would have the option of exchanging his shares of 1*l.* for shares of 22s. in the new company, such shares to be subject to a call of 2s.; the preference shares to be exempt from call. In the event of parties not agreeing to exchange their shares, they would be entitled to a distributive share of the property, according to their respective interests, after the whole of the debts and liabilities to the present time were paid.

The CHAIRMAN then proposed the following resolution:—

That the terms of the same are hereby approved of and confirmed, subject nevertheless to the confirmation of the same on the part of the Strathalbyn Mining and Smelting Company (limited); and the committee are authorised to take and adopt all necessary steps for carrying out the same.

The motion having been seconded, a PROPRIETOR wished to know whether the directors intended to exchange the whole of their shares for shares in the new company, as he was aware they were very large holders?

The CHAIRMAN replied that he should exchange the whole of his shares, and he had no doubt the other members of the board would do the same.

Mr. THOMPSON (a director) fully confirmed the Chairman, and stated that the calculation included the whole of the shares held by the directors.

A PROPRIETOR enquired whether the ore contained silver?

Mr. TAUNTON said every sample contained silver.

The resolution was then unanimously carried.

The CHAIRMAN then proposed the following resolutions, which were unanimously adopted:—

That on the said contract being confirmed on the part of the Strathalbyn Mining and Smelting Company (limited), the committee of management for the time being of the South Australian Copper Mining Company be, and they are hereby empowered to do, or cause to be done, all such acts as may be necessary for vesting in the said Strathalbyn Mining and Smelting Company (limited) all, and singular, the lands and hereditaments, and also the machinery, plant, debts, credits, and assets of, or belonging to the South Australian Copper Mining Company.

That the trustees of the South Australian Copper Mining Company be, and are hereby required and directed to grant and convey, when thereunto requested by the committee of management for the time being of the South Australian Copper Mining Company, or the purser or secretary thereof, all, and singular, the lands, hereditaments, and premises vested in them in trust for the South Australian Copper Mining Company, and the shareholders thereof.

That the foregoing resolutions be printed, and a copy thereof forwarded to every shareholder in the South Australian Copper Mining Company, at his last known place of abode; and further, that the said resolutions be advertised once in the undermentioned papers—that is to say, *Times*, *Daily News*, *Morning Herald*, *Mining Journal*, and *Herapath's*.

The CHAIRMAN said that, having got through the business of the day, he should take it for granted that all, or the greater part of the gentlemen present would be members of the new company, and an early opportunity would be taken to call them together and give them every information. (Cheers.)

Mr. CHAS. LOCOCK WEBB said he should propose a vote of thanks to the Chairman on two grounds—first, for commencing the business punctually; and secondly, for the able and courteous manner in which he had conducted it. He would, therefore, propose that the cordial thanks of the shareholders be given to the Chairman, for his able services in the chair.—The resolution was seconded and carried unanimously.

The CHAIRMAN, in acknowledging the compliment, felt highly flattered by the way he had been received. He hoped, when they next met, it would be to assure them of some more favourable result.

A PROPRIETOR enquired whether the holders of the preference shares would be entitled to 10 per cent., as well as being exempt from call?

The CHAIRMAN having replied in the affirmative, the proceedings terminated.

LONDON AND VIRGINIA GOLD AND COPPER MINING CO.

An adjourned extraordinary general meeting of proprietors was held at the London Tavern, Bishopsgate-street, on Monday,—Mr. A. S. AYARON in the chair.

Mr. ANDERSON (the secretary) read the notice convening the meeting.

The CHAIRMAN reminded the meeting that, upon the last occasion, a resolution was unanimously passed, that a circular should be sent to all the shareholders, to ascertain whether they desired to go on, or to retire from the company on receiving back 1s. 6d. per share. The board had received answers from shareholders to the extent of 9985 shares to proceed, and of 3770 that they would retire. From the others no reply had been received; and consequently, they must assume that "silence gave consent." If they did not answer, they had no right to complain of the course that might be adopted. The number of those who determined not to proceed was very small, the number of shares in circulation being 28,475. The amount to be paid those wishing to retire would be about 280*l.*, which would leave at the disposal of the company a balance in cash and calls in arrear of about 550*l.*; but to proceed with vigour, that sum would not carry them on very long. The directors could not proceed with the necessary works without advances from the shareholders. They had sent out instructions to Mr. Saunders to go on from month to month, and his engagement would be terminated at the end of April. They must consider what expenditure they were likely to incur in going on with the undertaking on a new footing. The first thing to be done was to get a competent superintendent, whom they could not expect to engage for less than from 500*l.* to 750*l.* a year. The next proposal was to sink a shaft where they expected to meet with the copper lode, and also to lay out some 300*l.* or 400*l.* in trying experiments on the gold ore; so that it was calculated, for the ensuing twelve months, they would have to lay out about 2000*l.*, and probably without any returns. On the other hand, if they should be fortunate enough to meet with the shoot of copper in going down, they would have a most valuable mine, which would repay them all their money. The board had endeavoured to find a competent superintendent, but he was sorry to say that, up to that day, had not succeeded; and it was considered they had better wait until they could find a gentleman fully qualified. He (the Chairman) would conclude by proposing a resolution that the shareholders who had signified their intention of retiring should receive back 1s. 6d. per share, upon relinquishing or transferring their shares to the company.—The resolution being seconded,

Mr. ANDERSON took the number of the shares, the holders of which were willing to go on or retire, when it was found that the shares of those willing to proceed amounted to 14,870, and those who elected to receive 1s. 6d. per share, 6165, the holders of the remainder not having replied.—The resolution was then unanimously adopted.

The CHAIRMAN said, as it had been decided by a large majority to go on, it was desirable that the directors should make a call, which could not be done without the assent of the shareholders at a general meeting, and which to avoid delay had better be done upon the present occasion. He would propose that the shareholders assent to a call not exceeding 2s., and as the members of the board were large proprietors they would not call up more money than was necessary.

Mr. BAKER (the solicitor), in answer to a question by a shareholder, said they would have been under the Limited Liability Act by the present time, but it was useless to go to the expense until it was finally settled whether the company should proceed. The resolution authorising that step had been passed in due time.

A PROPRIETOR wished to know the opinion of the board as to going on.

The CHAIRMAN said, the general opinion of the board was to proceed in a cautious manner.

Captain GREIG (a director) confirmed what the Chairman had said. The question was whether a person holding 100 shares would risk another 10*l.*, or wind-up?

The CHAIRMAN then proposed a resolution, that the meeting assents to the directors making a call not exceeding 2s. per share.—The resolution was seconded, and carried unanimously.

A cordial vote of thanks to the Chairman and directors, for the attention and integrity with which they had conducted the affairs of the company, terminated the proceedings.

ROSEWARNE CONSOLS MINING COMPANY.

A meeting of shareholders was held at the offices, Cannon House, Queen-street, on Tuesday, Mr. W. E. AYERST in the chair.

After the SECRETARY (Mr. Jeffree) had read the notice convening the meeting, the minutes of the former meeting were read and confirmed.

The accounts showed—By call of 10s. per share on 4096 shares, 2048*l.*; sale of tin, 2*l.* 4s. 1d.=2050*l.* 4s. 1d.—Costs and merchants' bills from Nov., 1855, to Dec., 1856, both inclusive, 564*l.* 1s. 1d.; paid for mine, 1250*l.*; office expenses and sundries, 10*l.*; engineer's travelling and preliminary expenses, 60*l.*; secretary's travelling expenses, and for reports, 30*l.*; bankers' charges, 2*l.* 10s.: leaving a balance in favour of the mine, 133*l.* 13s.

Major YORKE MARTIN complained that such a small quantity of tin had been sold; it looked perfectly ridiculous after the accounts they had received of the great quantities raised. How could this be accounted for.

A SHAREHOLDER observed that the only conclusion they could arrive at with regard to this was, that it could be merely considered as a sample.

Mr. FRYER asked whether it was true that this was the result of the sale of 26 sacks of tin?—Mr. JEFFREE stated that unfortunately this was the fact. They had believed the tin they had raised was of great value, but the general opinion was there had been some collusion; the agent who had concluded the sale had long since been dismissed the company's service.

The following reports from Captains P. Floyd, of Tincroft, and John Thomas, of West Providence, were then read:—

Wheal Anna, Jan 29.—According to your request, I have carefully inspected Rosewarne Consols, and herewith beg to hand you my report. My first object was to ascertain the extent and limits of the sett. After a survey, my attention was called to a new shaft, which is now sunk to a depth of 14 fms. 2 ft. 6 in. from surface, the lode in the bottom being about 3 ft. wide, composed of prian, and fluor-spar, with rich spots of yellow and grey copper ores, accompanied with many other promising indications of making a good lode in depth. I should, therefore, recommend the sinking of this shaft with all possible speed. From the kindly stratum of ground in which this lode is imbedded, I am led to think that by sinking 4 or 5 fms. deeper some great and important change for the better may be expected from the improved state of the ground and lode. In the meanwhile the bearing and course of the Wheal Unity lode should be correctly ascertained, as the lode is now producing large quantities of good copper ore. In continuance of this lode and course of ore into the Rosewarne United Mines affords a very important and desirable point to look at in connection with your mine. Also there are several lodes north and south of new shaft, adding much to the intrinsic worth of your sett, all of which could be easily and cheaply proved by driving a cross-cut north of Lambo lode, which would intersect the lodes at a depth of 16 fathoms from surface; by doing this it would drain the lodes from surface to the level, thereby enabling you to work the backs dry, without water charge. I would further beg to say that on looking at the mine altogether, with the many lodes that traverse the sett, and the kindly stratum of ground in which they are situated, with their close proximity to the rich mines of the Rosewarne United, Wheal Unity, and others of unusual promise, I think they cannot fail. If a fair trial be made, of soon amply remunerating the adventurers for their outlay. I cannot but express the high opinion I entertain of the Rosewarne Consols Mines generally, and of their becoming ere long a remunerative property; and, in conclusion, I would recommend your erecting a 36-in. cylinder engine immediately, in such a position as to command the drainage of the lodes to the north and south.

West Providence, Jan, 31.—In accordance with advice received, I have inspected the Rosewarne Consols Mine, and hand you the following, as my report thereon. Lambo lode is driven on at the adit level, which is about 16 fms. below the surface, for a great length; this lode varies in size from 6 in. to 2 feet wide, and produces a little tin and copper in places, but is poor generally. The Grey Ore lode is worked on at about 14 fms. below the surface; this lode is about 2½ feet wide, and presents a very kindly appearance, such as is rarely seen so near the surface—the last 3 fms. sinking on it has yielded copper ore of good quality; from what has been seen of this lode, there is sufficient inducement to explore it at a greater depth. There are other lodes and branches known to traverse the sett, some of which may be intersected by cross-cutting at the most desirable point when the shaft has been sunk. About 50 fms. north of Grey Ore lode, the surface for a great width is very uneven; it appears to have been broken up and worked in olden times at a shallow depth, from which, it has been said, a great deal of ore has been raised. During the last three months a shaft on these old workings has been cleared up to the depth of about 10 fms., when the water so increased, as to prevent them going deeper. In some of the old workings which are accessible from this shaft, tinstuff of good quality has recently been raised, and may be seen at surface. In looking at the situation of the sett, it being enclosed by Wheal Clowance, Crenver, and Wheal Abraham, Rosewarne United, and other mines, which have proved productive. I think it well situated, and deserving a vigorous prosecution, and have no doubt, if fairly developed, it will be a productive and profitable mine, to do which a pumping-engine must be erected.

Confirmatory reports of these were read from Capts. J. Delbridge, of South Crenver, and J. Richards, of Wheal Guskus.—The reports were then received and adopted.

The CHAIRMAN stated there appeared to be a necessity for the erection of an engine. The secretary had, therefore, advertised for one to suit their purpose, and, in answer to which he had received several letters, which he would now read to them.

The SECRETARY then read various letters from parties in the county offering engines for sale.

Mr. CHANDLER said it would be satisfactory for them to know, previous to their purchasing a steam-engine, whether the prospects of the mine were such as at present to warrant its erection. He represented a number of shareholders, who had the greatest

confidence in the mine; his only object in mentioning this was, whether at present this might not be premature.

Mr. G. F. MENDUS stated he had every confidence in the report of Capt. J. Thomas, of West Providence; he had greatly improved that mine, and he thought his opinion ought to be taken.

Major YORKE MARTIN said he was always for economy. There was no doubt that the amount of tin as stated had been raised, and afterwards, in some mysterious and unaccountable manner, considerably deteriorated in value. Mr. Glanville had stated he had seen it on the mine, yet, nevertheless, it had only realised the small amount which they had seen prefixed to the credit of the company. He had heard from one of the shareholders, a resident in the county, that the mine could be considered a most promising one.

A SHAREHOLDER said there was no doubt the tin was there, for he himself had seen it; the discrepancy he could not account for. The general opinion of those residing in the locality was, that it was a most valuable property; and that opinion, as far as he was able to judge, he could confirm. The only thing that was required was good management; this they could easily obtain. The next was capital, which was perhaps more difficult. He could only say that were he in a position so to do he would not object to put down half the working capital of the mine. Situated as it was in one of the best districts of the county, it could not fail, if worked with energy, to prove a good dividend-paying mine.

The SECRETARY stated he represented a large interest. His opinion, and that of his friends was, that a sufficient call should be made to erect the engine, and put the mine in a good position, instead of a small one, which perhaps would be inadequate. He believed only a small capital would be required. They had secured the services of Capt. J. Richards, of Wheal Guskus, as their agent; he was a hard working, practical miner; he had great confidence in him, and he believed he would do his duty.

A SHAREHOLDER could bear testimony to his abilities as a working miner, having repeatedly met him at Wheal Guskus.

Mr. FRYER said it was with great satisfaction he had heard so good and cheering accounts of their prospects.

It was then moved and seconded that a steam-engine of sufficient power should be erected as early as possible, and that the committee are hereby authorised to treat for the purchase of such engine.

After some discussion as to the amount of call to be raised, it was ultimately decided that a call of 2s. per share be made.

Mr. W. P. Cardozo was appointed assistant purser, at a salary of 2*l.* 2s. per month; and Capt. J. Richards, of Wheal Guskus, agent, at a salary of 3*l.* 3s. per month.

The following gentlemen were then elected as a committee of management:—Messrs. Thomas Boorman, W. E. Ayerst, and R. Glanville, until the next general meeting.

A vote of thanks was then given to the Chairman and secretary, which being suitably acknowledged, the meeting separated.

CARNARVONSHIRE SLATE COMPANY (LIMITED).

The ordinary general meeting of shareholders was held at the offices of the company, on Wednesday, Mr. GEORGE TYRRELL in the chair.

After the usual preliminaries, the statement of accounts and report were submitted, of which the following are abstracts:—

The progress of the works, though satisfactory so far as they have been prosecuted, has not been so rapid as was anticipated at the period of the last half-yearly meeting. The present state of the works may be thus shortly described:—Tanralt remains untouched since last report, as the means at the disposal of the board have not justified expenditure beyond the works at Piasdu, nor is it intended to resume them until the quarry at Piasdu has become more productive. The condition of the Piasdu Quarry cannot be regarded otherwise than as in a state of preparation for making slate. The opening of this quarry, notwithstanding its many delays, may now be said to be ready for the raising of slate-rock—not that the labour and expense of uncovering will cease, but that there has been sufficient extent opened to justify the working of those parts for the conversion into slate, instead of removing the rock for the purpose of opening. Of course, other parts will be simultaneously opened, and additional slate-rock exposed, but even at present, sufficient slate-rock is accessible to demand the adoption of the usual means of raising the masses, in lieu of the slow and expensive process of the turn-tree. For such customary means or machinery the quarry has been prepared by the extension of the Dolbebi level, under the opening or quarry, so that all water runs off without cost into that level, and thence into the drain, cut some time since, which will conduct it into the river. All this laying out is creditable, and appears to justify the agent in his recommendation that a water-balance should be erected for the purpose of raising the rock and rubbish from the quarry, as the means provided by the level will relieve the quarry of all water used in the balance, without expense. The directors have had designs for water-balances submitted to them, and, after much care, have arranged for the erection of one upon a scale equal to the wants of the quarry; and it may be so worked as to enable both sides of the quarry to be in operation at the same time. The cost will be 700*l.* When this has been completed, more extended openings will have been prepared; and as the works expand, the prosperity of the undertaking will require further expenditure to develope its resources.

The statement of receipts and disbursements from the formation of the company to Dec. 31 showed:—

Capital and interest	£39,316	15	2		
Slates sold	953	2	0		
Rent and produce of Tanralt farm	169	18	3=	£40,439	15 5
Preliminary expenses	501	14	4		
Purchase of quarries	26,594	14	9		
Works and general expenses	10,495	17	9		
Materials and plant	997	19	1		
Incidental charges	1,734	9	4=	40,324	15 3
Leaving balance in favour of company				£115	0 2

The directors having recommended the payment of a dividend of 3 per cent. upon the paid up capital, a discussion arose as to the advisability of such a course, the directors contending that, as the profit and loss account showed that they had actually earned the money, they were justified in recommending a dividend; and the opposition party asserting that, although the money had been earned on the profit and loss account, it had been expended on capital account, and they, therefore, had not money enough at their disposal for paying a dividend. The reports and accounts were then received and adopted; but, upon the resolution for declaring a dividend being put by the Chairman, no seconder appeared, and the motion was lost.

The CHAIRMAN then declared the meeting special, and it was resolved that the directors should be authorised to raise a sum not exceeding 10,000*l.* upon the issue of debentures, bearing interest at 5 per cent. per annum.

THE WELSH POTOSI MINE.—We have just been furnished, by a correspondent who has recently inspected the mines of Cardiganshire, with a report of this valuable mineral property, from which we extract the following:—The mine is situated in a highly metalliferous district, in the county of Cardigan, and through the sett (which extends two miles in length by one in breadth) runs one of those great champion lodes, which have proved so productive at the Lisburne, Cwmystwith, and East Daren Mines, and which are now paying large dividends. The Esgair-hir, or Welsh Potosi, Mine was formerly worked by Sir Hugh Myddleton, and the profits which he accumulated from this property are said to have exceeded 20,000*l.* per annum. Shortly after this the mine was worked by Sir Carbery Pryse, the Duke of Leeds, and other distinguished individuals, and the returns are represented to have amounted to 700 tons of ore per month. Indeed the extent of the underground workings, and the magnitude of the lodes, show that many thousands of tons of ore must have been taken away by the ancient adventurers. Notwithstanding the great returns made in former times, little appears to have been done at the mine for the last century and a half, which may probably be accounted for from the difficulties of transit to the mine, and the want of machinery to prosecute the underground workings beyond the water level. In order to show the great difficulties under which the ancient adventurers worked this mine, it may be mentioned that the ore was formerly conveyed on horses' backs across the mountains, for a distance of five miles, to be smelted. A few years since, an excellent road was made from Tallybout to this mine, and this appears to give an impetus to the successful prosecution of the works. A company, in the year 1854, commenced vigorously working these mines, with a capital of 120,000*l.*, more than one-half of which has been called up, and, judging from the underground workings, and the extent of the machinery and buildings, I should calculate that upwards of 50,000*l.* must have been spent on the property during the last three years. The machinery consists of two steam-engines for hauling, pumping, crushing, and conveying the trucks by means of an incline to the dressing-floors. There are also two water-wheels of 40 ft. each, and one of 26 ft. in diameter, supplied by several reservoirs. These wheels are available for crushing and pumping when the supply of water is adequate for such purposes; but during the time of frost and drought, the substitution of steam-power will render these mines capable of being worked, an advantage not possessed by any other mine in the district. The dressing-floors are laid out on a very extensive scale, and the machinery for dressing the slimes is admirably contrived. The building are very numerous, and consist of every necessary erection to carry on the works on a scale of great magnitude. The barracks are capable of containing 300 men, which is a great advantage on such an isolated mountain, and the want of which has always operated as a barrier to the effective carrying on of the mine. It appears that upwards of 18,000*l.* worth of ore has been realised during the last 2¼ years, and the quantity of ore now opened in the levels has been estimated, by an eminent mining authority, to amount to 50,000*l.*; and as all the necessary machinery is now erected, it may be safely asserted that the mine will shortly pay large dividends. Indeed, considering the extent of the sett, the character of the lodes, the manner in which the mine, is opened, the quantity of ore available, and excellent condition of the machinery and buildings, it may be confidently asserted that the Potosi Mine is not surpassed by any other mine in the principality.

CLARA MINE (CARDIGANSHIRE).—This mine, which has for a long time been labouring under great disadvantages, is at last in a fair way of leading to successful results, but owing to the small scale on which it is worked, by a few men, it cannot be expected that the lode can be prosecuted, and shown in its best colours, as it might if greater force were laid on. An engine-shaft has been sunk perpendicularly 31 fms., with good pitwork, &c., fixed. A cross-cut has been extended about 18 fms., when the lode was intersected, of a most promising feature; here they continued west on the lode for about 20 fms., which averaged in width 6 feet, and produced the whole of the distance about 15 cwts. of silver-lead ore to the fathom. The air becoming dead, it was properly advised to stope the ground in the back of the level, until a communication was effected with the old workings above; this is now in operation, and the desired effect daily expected, when every reason for the further improvement of the value of this speculation is looked for. In fact, I may say so without any doubt, as I find the secretary of the company is in possession of reports from one or two of the most experienced mining agents in the country, who inspected these old bottoms, and stated that there were many places producing 1 ton of lead ore per fathom. It is Capt. Trevethan's intention after this ground is holed, and the old mine drained, to set on a greater number of men to stope this ore ground, and at the same time to sink the engine-shaft for another 15 or 20 fms.; then again cross-cut to the lode, which would leave that amount of backs on the course of the lode, and at such time there is no doubt, from the quantity of ore taken from this lode, that it will lead to profitable and lasting results. Having recently visited the neighbourhood, I examined the set, and find it sufficiently extensive going west, and strongly bordering on its richest neighbour; but the eastern part of the sett is not so extensive, which I regret, as the main lode can be traced for a considerable distance, going into the adjoining ground; and could this be procured in addition, it would be, in my opinion, one of the best setts that ever "Cymru" boasted of.

CAPABILITIES OF DARTMOOR.—This waste is, in the opinion of many practical men, capable of being rendered extremely fertile. Indeed, it has been ascertained, in carrying on naphtha works there, that the peat contained 60 lbs. of paraffine to the ton. The surface rocks and stones are the cause of the great cost in reclaiming land; but it is anticipated, by making the granite and peat marketable, much of the land would be cleared and drained. There is an ample supply of water-power, which has already been employed to a large extent in the manufacture of gunpowder, and which could no doubt be utilised in carrying on other operations.

DYFFRYN CASTELL LEAD AND BLENDE MINE,

LLANBADARNFAWR, NEAR ABERYSTWITH, CARDIGANSHIRE.

In 6000 shares, 11s. 6d. paid.

Intended to be registered under the Limited Liability Act to £1 per share.

COMMITTEE OF MANAGEMENT.

Col. CROFT, 15, Regent-street.
J. W. WILLIAMSON, Esq., 8, Serle-street, Lincoln's Inn.
GEO. McDOWELL, Esq., Trinity College, Dublin.
Mr. T. P. THOMAS, 2, Crown court, Threadneedle-street.

BANKERS—Commercial Bank of London.
SECRETARY—Mr. Vaughan Prance.

OFFICES OF THE COMPANY,—37, NEW BRIDGE STREET, BLACKFRIARS.

This mine was commenced in the early part of 1855, since which a shaft has been sunk about 17 fms. in the western part of the sett, where a water-wheel (40 ft. diam. 4 ft. breast), residence for the captain, smiths' and carpenters' shop, powder-house, &c., have been erected. A considerable quantity of pumps, materials, and stores have been purchased, and the mine is in a full state of working; but in consequence of a large shareholder not having paid his proportion of cost, the operations have been partially suspended, in order to have some arrangement with him. That arrangement having been completed, and the mine having been inspected by two respectable mining agents, who have reported most favourably upon the prospects, it has been determined to carry out their reports, and to proceed at once with the erection of a crusher, &c. The lode being parallel to the Lisburne Mines (which, upon an outlay of £7500, has given back in dividends £99,600, and the mine now saleable at about £80,000), the stratification of the country being the same, and the component parts of the lode the same, there is every prospect of the Dyffryn Castell Mine becoming a large and profitable concern. It will be seen by the agent's reports that £500 will be sufficient to place the mine in a position to give £800 to £1000 per annum profit from blende alone; therefore, the promoters can with confidence recommend as a safe speculation to the public the shares at 11s. 6d. per share, being the amount actually expended. There are no debts upon the mine, the last call having been made for the purpose of discharging every liability up to the present time. A call of 2s. per share will be required to provide for the crusher and dressing apparatus, when returns will be commenced, which we expect not only to pay the future cost, but to leave a profit to the adventurers.

Mr. T. P. THOMAS, of 2, Crown-court, Threadneedle-street, London, is authorised to dispose of 1500 shares, to whom application for same, accompanied by a remittance of 11s. 6d. per share, may be made; and should the number of shares applied for not be allotted, the amount will be at once returned, without deduction.

The following reports from Capts. Michael Barbery, Jas. Paull (of Goginan), and Matthew Francis, on this valuable property, will be read with interest:—

Agreeably with your request, I beg to hand you my report of this mine, which is situated in the parish of Llanbadarnfawr, Cardiganshire, and about two miles from Ponterwydd, quite in a mining locality, and bounded by several productive mines—viz., The Lisburne Mines, Esgair Llee, Nant-y-Cria, Cefn Brwyno, Goginan, Nanteos and Pearhiw, and on the same lode as the latter. This sett extends upwards of one mile in length on the course of the lode, and about one mile in breadth, through which traverses a large lode. The geological formation of this country is principally clay-slate, which possesses all the metalliferous character of the well-known Lisburne Mines. About 50 years ago, this mine and Frongoch were worked for blende alone, which are well known to have produced immense quantities of same for many years. The lode is from 4 to 5 fms. wide, principally composed of gossan, quartz, blende, porphyry, and killas, intermixed with good quality lead ore, and is of a very promising character, running east and west, and underlays south about 1 ft. in a fathom. The lode has been worked from the surface to about 10 fms. in depth for blende; and, from the accounts I have been able to obtain, the general prospects in the bottom are very encouraging, one portion of the lode, for 4 ft. wide, being solid blende. Judging from the enormous masses of first quality gossan, containing both blende and lead, now lying on the surface, which, by the aid of machinery, may be returned at a profit, I have every reason to believe the information received to be well founded. The local advantages in this sett are very great, inasmuch as there is sufficient water-power here for any machinery required for both sinking and dressing,—summer and winter,—and extensive dressing-floors can be laid out to much advantage; also, an excellent and easy road for the carriage of the ore and materials to and from Aberystwith. Now, taking into consideration the general promising character of the lode at the surface, together with the flattering accounts of the prospects in the bottom of the old workings, I have no hesitation in saying I consider the mine to be a right good speculation. I beg to say, in conclusion, that I consider there is no doubt of the mine paying good profits, provided there is a fair capital first subscribed to lay the mine open in a good working order; and I would advise a new engine-shaft being sunk in the centre of the old workings, on the course of the lode, when at the depth of 10 or 12 fms., to extend east and west on the course of same, which would, in my opinion, lay open sufficient ground to produce immense quantities of blende, which at its present selling price may be taken away, leaving a profit to the adventurers; and judging from the general indications of ore, it may reasonably be expected at the depth of about 20 fms. from surface this lode will prove rich for lead, and, if developed in the most judicious manner, valuable returns upon a moderate outlay. There are two other promising lead lodes to the south of the above, traversing the property, which I have not dwelt upon. At present no machinery is erected, but there are several men employed in cutting ground for the wheel-pit and crushing-house, which will be ready for the masons in a few days; a smiths' and carpenters' shops are in course of building, water course making, &c. MICHAEL BARBERY.

Goginan Mine.—In accordance with your request I have carefully inspected the Castell Mine. The length of old workings laid open on the back of the lode is about 40 fms., and for a few fms. in depth, where considerable quantities of blende and a little lead ore has been returned. The new engine shaft is commenced to sink on the course of the lode, about 18 fms. west of the eastern part of the workings, and is commenced on the highest point on the back of the lode. The shaft is cut down within 2 fms. of being as deep as the adit level, which is about 7 fms. below the surface at that point, and there are now five sets or frames of timber already fixed in the shaft, and it will require five frames more to complete it to the surface, the size of the shaft is 10 ft. long by 6 wide within the timber; it will cost about £60 to complete it to the present depth, including timber, and labour, in cutting ground, &c.,; and to sink the two fms. from the present bottom of the shaft to the adit level, it will cost about £35 more, as the ground is very hard. About 8 or 10 fms. east of the present shaft there is a large open working from the surface to the depth of the adit level, and from all accounts for about 8 or 9 fms. below that point, where a shaft can be made at a very small expense on the course of the lode, which will enable you to get down to develope the mine in depth, in much less time than sinking the present engine-shaft, although the position of the present shaft is rather more favourable, it being more in the centre of the present workings, and as the runs of ore generally dip west in this part, it would be more in the centre of the mine, but of course the eastern ground, although not much developed as yet, is quite as promising as the western, as there is a junction of two lodes about from 20 to 30 fms. east of the old workings. The wheel-pit is also completed for the 30-ft. water-wheel, which is also fixed in a line with the present shaft, but of course this can be arranged by fixing an angle-bob between the wheel and the shaft, in order to bring the line of rods to work in an eastern shaft if thought proper; but if you are not in any particular hurry about getting down the shaft for a few months, and if you do not mind a few pounds extra in getting down the present shaft, I should advise you to go on with it, and get it down as fast as possible; but, on the other hand, if you are in great haste to get down for a 20 or 30 fm. level below the old workings, and that the funds for doing so are not very forward, I should decidedly say, commence and get down the shaft in the eastern part of the working, as it will save much time; these are my views on the matter, and I put them plainly before you. The water-course is cut, I consider, much too high up in the side of the mountain, and is in rocky ground, and it does not take up the main stream from Esgair Llee Mine, it only takes up the two small streams from the south brooks, which I fear will not be a good supply of water in a dry reason, but by continuing the same leat about a mile further east, it will take up the stream from the above mine; the water-course ought to have been taken up in the low ground, which would have been a much shorter line of leat and much less expense, and would have taken up all the water in the valley. If there was a good 36 ft. water-wheel erected a little below the mine, in the side of the hill, it would have been of quite sufficient power to drain the mine to a considerable depth, and crush or draw at the same time, which would have proved the mine; and then, if found to be productive, other erections could follow as required; this would have been the cheapest way for the proper development of the mine. With regard to the prospects of the mine, in my opinion, they are highly favourable, the lode being of a very promising appearance indeed, and in many places from 12 to 15 ft. wide, composed of quartz, blende, carbonate of lime, and clay-slate, and spotted with lead ore, and, in my opinion, will yield large deposits of lead ore in depth. I consider it to be one of the best speculations I know of in this part of the country; if any further explanation may be required at any time, I shall be most happy to give it. JAMES PAULL.

Steddfagerig.—Agreeably with your request, I send you my views of the Dyffryn Castell Mine. There are some places, owing to the undefined character of the veins and other circumstances, that you cannot pronounce an opinion upon with any degree of confidence. But any person possessing a tolerable knowledge of the geology of mineral veins, and whose memory is moderately stored with comparisons of productive land lodes, cannot fail to come to the conclusion that this is a very valuable mining property. At the first place we looked, some 200 fms. east of the blende mine, I think I never saw a finer cut-crop of minerals. The lode is there opened by an adit, which runs into the hill eastward (S. 85 E.), and yields for several feet wide the metals of copper, lead, blende, mixed with carbonate of lime in the finest form imaginable. In fact, to any one uninitiated in the worth of metallic lodes, this lode presents a most beautiful appearance, and I have no doubt in saying, that by following this piece of vein, so highly metalliferous and well mineralised, eastward into the hill, or downward into the firm rock, a highly valuable course of ore will be found. With reference to the blende mine, I am of opinion, from what I have seen of the veins of this country, that the blende will wear out at no great depth, and its place in the lode will be filled with lead ore. I could give you many instances, but Llwynwnwoh, on the Frongoch lode, is sufficient for my purpose; this, like the Dyffryn Castell Mine, was a mass of blende at the surface for 16 ft. wide, but at the 24 fathom level the blende disappeared, and the lode was found filled with lead for 16 ft. wide. I am not of opinion that the 10 fm. level will be deep enough to find this change effected, most likely it will take place between the 20 and 30 fm. level. In this opinion I am supported by analogy, but, at the same time, the order of those transitions in one vein is not a certain rule for another. MATTHEW FRANCIS.

Castell Mine, Jan. 20, 1857.—In compliance with your request, I have met Capt. Matthew Francis on the mine, and we have carefully inspected the same, and it is a matter to me of great satisfaction to find that he fully approves, and is ready to confirm, my views as to general prospects, and the mode of suggested developement, stated in my general report of this mine, dated April 16, 1855; and from what has been done since, I see no cause to retract or to change my former views on the general prospects of this property. The engine-shaft is sunk 17 fms. below the surface, which is, we think, quite sufficient for present purposes. The lode is from 4 to 5 fms. wide, and has been partially wrought on at the surface by the ancients for blende, for about 40 fms. in length. Now, we consider that the lode for its whole breadth will, for a considerable length, on an average yield 4 or 5 tons of blende per fathom, which, at the present price, with the aid of machinery, will, we consider, leave a fair profit to the adventurers, say £800 or £1000 per annum; but in order to accomplish this, a crushing mill must be attached to the present wheel, which will, together with dressing apparatus, sheds, floors, &c., cost about £500; this sum, we think, will be sufficient to cover the whole of the erections, and to put the mine in good working order. The buildings consist of a good carpenter's shop and smithy, counting-house, material and powder houses, and a very fair stock of good working materials. For the present, we would not advise your doing any more at the East Castell. I might say more on these matters, but I think Capt. Francis will report more fully on them. MICHAEL BARBERY.

Jan. 20, 1857.—It is not necessary for me to go into any statements as to the locality or geological formation of this mine, as I have read the report of Captain Michael Barbery, furnished to you on the 16th April, 1855, and which I corroborate in every respect, as I consider it a very lucid and appropriate report. I will, therefore, at once refer to matters for practical consideration. Capt. Barbery and myself yesterday thoroughly examined the mine, particularly the parts of the lode excavated by the ancient workmen said to be done about 40 years ago, when the blende over the Frongoch deposit of lead ore was worked, it is said by the same person, Mr. Sheldon, and there are various points of analogy between these deposits, which I shall further allude to before concluding this notice. We found the excavations extended along the length of the lode for about 40 fms., we could not see the bottoms of the different sinks, but they are said to be about 10 fms. deep. The main excavations are about 20 fms. long each, and are separated by a piece of unwrought ground in which the shaft is situate for drainage and drawing; the length of this piece of unwrought ground is from 10 to 12 fms., and it is possible that this ground may prove productive, as the cross-cut from the bottom of the shaft, which is 17 fms. under the surface, has passed into lode-stuff, chiefly carbonate of lime highly crystallised, and branches of blende. I mention this as this shaft unquestionably is well situate for draining both excavations, and therefore well selected in that respect, and may also be nearer productive ground to the eastward than it appears to be at the surface. We were struck by the very expensive mode of operation of the old men; the borer holes were quite small, placed close together, and very short; it would be easy with borers of proper size, to blow down 20 times as much ground at one blast as they did, and when we take into consideration that the blende, the produce of these holes, had to be reduced to powder by hammers in the hand of girls, perhaps a couple of barrows full a-day, and that a crushing mill attached to your present wheel would crush 60 tons a day, or 700 times as much as a girl, and that at scarcely any cost, it is easy to be conceived that if the mine could be worked to any advantage then, with anything like similar prices for the blende, that considerable profits ought now to be made. We looked carefully into the lode, which is from 20 to 30 ft. wide, and we found it composed of carbonate of lime, thickly traversed with good solid ribs of blende, mixed with fresh and beautiful gossan, carrying rich lead in small quantities, but I was particularly struck with the freshness of the crystallisation, clearly showing that the upper section of the lode is at this moment acted upon by the mineralising agency that collected the formation, and I am convinced from this cause and effect, so apparent now that the excavations have been so long opened, that there is a mass of lead below, and that the whole mass of blende is resting upon another metal. The whole quantity of lode drained by the shaft, say for a depth of 17 fms., may be fairly taken at 3400 fms., and if we subtract from this 1000 fms. for ground already worked, it would give 2400 fms. of the ground to work away, without taking into consideration discoveries, or the lengthening of the ore ground through the unwrought portion of the vein. I understand the price of blende is now £4 per ton, and I apprehend that it was about the same price when the ground was worked away in a manner that appears to us so unskilful; if so, the ground must have yielded 1¼ ton of blende to a fm. on an average, to have paid the cost; but if it yield 1 ton to a fm., Captain Barbery, Capt. Lester, and myself, calculate that it ought to leave one half profit, as the ground ought to be broken for £1 per cubic fm., and the other expenses would be nearly covered by another £1; but if it leave one-third profit, it would be equal in remuneration to most lead mining in this country, so that there is nothing left for me but to recommend the company to prosecute the mine without delay and effectually. There is a shaft sunk unwatering the lode to a depth of 17 fms. There is a good water-wheel, 30 ft. diameter, 4 ft. wide, erected, and a very good arrangement of offices, storehouses, smithy, and carpenters' shop, and outhouses, all very well built and convenient. I must here do an act of justice to the agents, or agent, that selected the site of the water-wheel. I saw the subject mentioned by Mr. Ennor in the *Mining Journal*, in a way not only to cast opprobium on the judgment of the agent, but to carry dissatisfaction into the minds of the shareholders. I beg to assure the shareholders that there is not the slightest foundation for any censure with respect to the fixing of this wheel and machinery. I have had great experience in this class of engineering, and I consider the position of the wheel, for the purposes to which it is, and is to be applied, the best that could be obtained. The work to be done is to apply to this wheel a good 30 or 32 in. pair of crushing rollers, working one round to three of the water-wheel. A good flooring, well supplied with jigging batches, buddles, with sheds, railroads for delivering the stuff where required—these together, would cost £350; and I should say £150 would be enough to put the excavations or underground work in working order, for it is only to break down the sides and open the lode like a quarry; and the walls, I should say, would stand with little timber for 100 ft. deep—say altogether, £500. And I should say, in three days after the crushing mill goes to work, the carriers may be ordered to the mine to take away the clean blends, in quantities of two or three tons per day. With reference to East Castell Mine, I have forwarded my report to Mr. Thomas, and I see no reason to change my views, but with the present price of blende, I should recommend you to stick to the Castell Mine as a safe and speedy medium of profits. I ought to say that the ground below the crusher is most favourably formed and situated for an extensive and cheap dressing floor, a valuable requisition in any, but esnecially in a blende mine. MATTHEW FRANCIS.

THE BOG LEAD MINING COMPANY (LIMITED).

WENTOR, NEAR SHREWSBURY, SHROPSHIRE.

In 20,000 shares, at £1 10s. per share.

Deposit 8s. per share, payable on allotment; the remaining to be paid by instalments, not to exceed 5s. per share, quarterly. No further calls or liabilities. No deed required for the transfer of shares. Bi-monthly meetings will be held, at which all accounts of receipts and expenditure will be exhibited. Neither the committee nor any co-adventurer will have the power to contract any debt, or incur any liability, for or on behalf of the company, by bills or notes, borrowing monies, or otherwise.

Sir JOHN DORAT, F.R.S.L.—CHAIRMAN OF THE COMPANY.

COMMITTEE OF MANAGEMENT.

Mr. CHARLES BATT, Longparish, Whitchurch, Hants.
Sir JOHN DORAT, Bury-street, St. James's, London.
Capt. WILLIAM BARRATT, Brentlow, Worthan, Salop.
Mr. J. W. S. CHENHALL, 13, Burton-street, Eaton-square, London.
Mr. WILLIAM B. GIBBS, Westminster.
Mr. WILLIAM NEWMAN, Coleshill-street, Eaton-square, London.
Mr. FRANCOIS T. BLANC, 5, Caroline-street, Eaton-square, London.
Mr. WILLIAM SALTER, Hartford Bridge, Winchfield, Hants.
Mr. WILLIAM DODD, Eaton-place, Belgrave-square.

TREASURERS—Messrs. William Bowran and J. W. S. Chenhall.
CAPTAIN AT THE MINE—Mr. William Barratt.
SECRETARY—Mr. James Collins, 13, Burton-street, Eaton-square, London.
BANKERS—London and Westminster, St. James's-square.

PROSPECTUS.

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